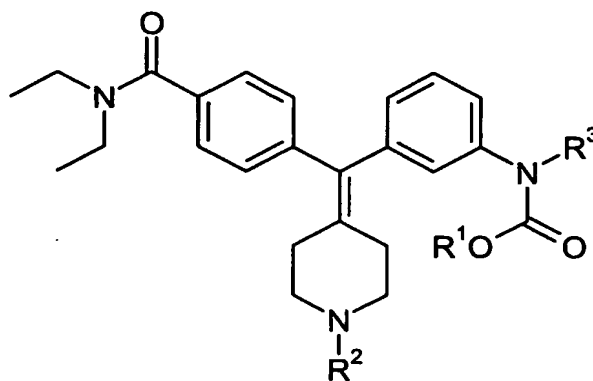


What is claimed is :

1. A compound of formula I, a pharmaceutically acceptable salt thereof, diastereomers, enantiomers, or mixtures thereof:

**I**

wherein

- R^1 and R^3 are, independently, selected from hydrogen, C_{1-6} alkyl, and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl; and

- R^2 is selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl, wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen, C_{3-6} cycloalkyl or C_{1-6} alkyl.

2. A compound according to claim 1, wherein R^1 is C_{1-3} alkyl; R^3 is hydrogen; and

R^2 is selected from C_{1-6} alkyl and C_{3-6} cycloalkyl-methyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl-methyl are optionally substituted with one or more groups selected from methoxy, ethoxy and isopropoxy.

- 5 3. A compound according to claim 1,
 wherein R^1 is selected from C_{1-3} alkyl and halogenated C_{1-3} alkyl;
 R^3 is selected from hydrogen, C_{1-6} alkyl, and C_{3-6} cycloalkyl, wherein said
 C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups
 selected from C_{1-6} alkyl, halogenated C_{1-6} alkyl, $-NO_2$, $-CF_3$, C_{1-6} alkoxy, chloro,
10 fluoro, bromo, and iodo; and
 R^2 is selected from C_{1-6} alkyl, C_{3-6} cycloalkyl and C_{3-6} cycloalkyl-methyl,
 wherein said C_{1-6} alkyl, C_{3-6} cycloalkyl and C_{3-6} cycloalkyl-methyl are optionally
 substituted with one or more groups selected from C_{1-6} alkyl, halogenated C_{1-6} alkyl,
 $-CF_3$, C_{1-6} alkoxy, chloro, fluoro and bromo.
15
4. A compound according to claim 1,
 wherein R^1 is selected from methyl and ethyl;
 R^3 is hydrogen; and
 R^2 is selected from n-propyl, cyclopropylmethyl, n-pentyl, 2-methoxyethyl,
20 n-butyl, 2-isopropoxyethyl, 2-ethoxyethyl, 3-methoxypropyl, cyclobutylmethyl,
 methyl, and ethyl.
5. A compound according to claim 1, wherein the compound is selected from:
COMPOUND 1: methyl [3-[[4-[(diethylamino)carbonyl]phenyl](1-propyl-4-
25 piperidinylidene)methyl]phenyl]carbamate;
COMPOUND 2: methyl [3-[[1-(cyclopropylmethyl)-4-piperidinylidene][4-
 [(diethylamino)carbonyl]phenyl]methyl]phenyl]carbamate;
COMPOUND 3: methyl [3-[[4-[(diethylamino)carbonyl]phenyl](1-pentyl-4-
 piperidinylidene)methyl]phenyl]carbamate;
30 COMPOUND 4: ethyl [3-[[4-[(diethylamino)carbonyl]phenyl](1-propyl-4-
 piperidinylidene)methyl]phenyl]carbamate;

COMPOUND 5: ethyl [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-methoxyethyl)-4-piperidinyldene]methyl]phenyl]carbamate;

COMPOUND 6: ethyl [3-[(1-butyl-4-piperidinyldene)[4-[(diethylamino)carbonyl]phenyl]methyl]phenyl]carbamate;

5 COMPOUND 7: [3-[[4-[(diethylamino)carbonyl]phenyl][1-[2-(1-methylethoxy)ethyl]-4-piperidinyldene]methyl]phenyl]- carbamic acid, methyl ester;

COMPOUND 8: [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-ethoxyethyl)-4-piperidinyldene]methyl]phenyl]- carbamic acid, methyl ester;

10 COMPOUND 9: methyl 3-((1-butylpiperidin-4-ylidene){4-[(diethylamino)carbonyl]phenyl}methyl)phenylcarbamate;

COMPOUND 10: methyl 3-{4-[(diethylamino)carbonyl]phenyl}[1-(3-methoxypropyl)piperidin-4-ylidene]methyl}phenylcarbamate;

COMPOUND 11: methyl 3-([1-(cyclobutylmethyl)piperidin-4-ylidene]{4-[(diethylamino)carbonyl]phenyl}methyl)phenylcarbamate;

15 COMPOUND 12: methyl 3-{4-[(diethylamino)carbonyl]phenyl}(1-methylpiperidin-4-ylidene)methyl}phenylcarbamate;

COMPOUND 13: methyl 3-{4-[(diethylamino)carbonyl]phenyl}(1-ethylpiperidin-4-ylidene)methyl}phenylcarbamate;

20 COMPOUND 14: ethyl 3-([1-(cyclopropylmethyl)piperidin-4-ylidene]{4-[(diethylamino)carbonyl]phenyl}methyl)phenylcarbamate;

COMPOUND 15: ethyl {3-{4-[(diethylamino)carbonyl]phenyl}(1-methylpiperidin-4-ylidene)methyl}phenyl}carbamate;

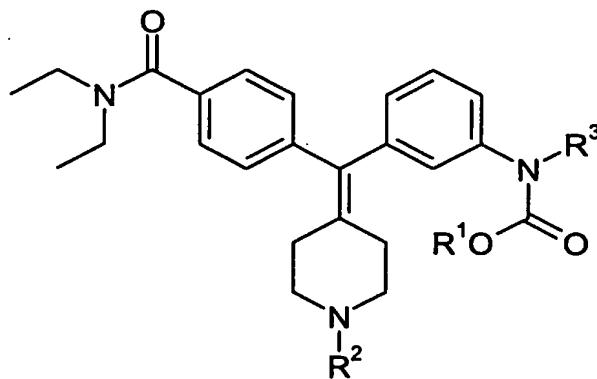
COMPOUND 16: ethyl {3-[[4-(aminocarbonyl)phenyl](1-ethylpiperidin-4-ylidene)methyl]phenyl}carbamate;

25 COMPOUND 17: [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-methoxyethyl)-4-piperidinyldene]methyl]phenyl]- carbamic acid, methyl ester;

and pharmaceutically acceptable salts thereof.

6. A compound according to any one of claims 1-5 for use as a medicament.

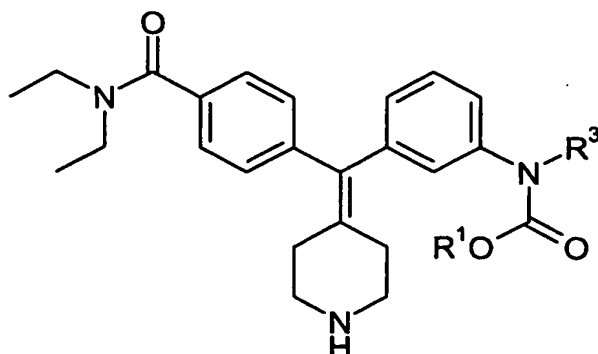
7. The use of a compound according to any one of claims 1-5 in the manufacture of a medicament for the therapy of pain, anxiety or functional gastrointestinal disorders.
- 5 8. A pharmaceutical composition comprising a compound according to any one of claims 1-5 and a pharmaceutically acceptable carrier.
9. A method for the therapy of pain in a warm-blooded animal, comprising the step of administering to said animal in need of such therapy a therapeutically effective
- 10 amount of a compound according to any one of claims 1-5.
10. A method for the therapy of functional gastrointestinal disorders in a warm-blooded animal, comprising the step of administering to said animal in need of such therapy a therapeutically effective amount of a compound according to any one of
- 15 claims 1-5.
11. A process for preparing a compound of formula I, comprising:



I

- 20 reacting a compound of formula II with R²-X:

57

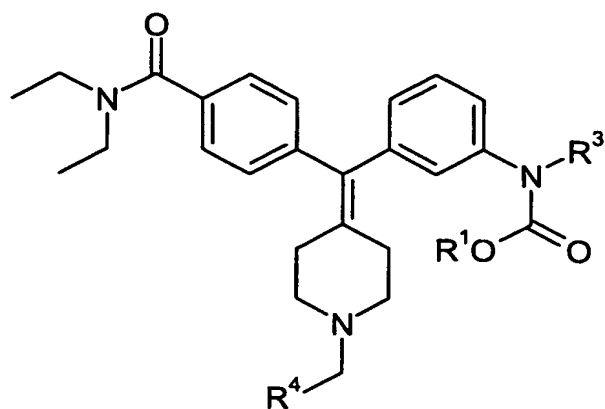
II

wherein X is halogen;

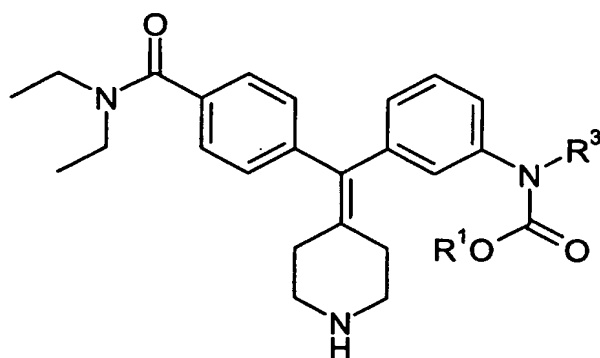
- R^1 and R^3 are, independently, selected from hydrogen, C_{1-6} alkyl, and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl; and
- R^2 is selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl, wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl.

12. A process for preparing a compound of formula III, comprising:

58

III

reacting a compound of formula II with R^4 -CHO:

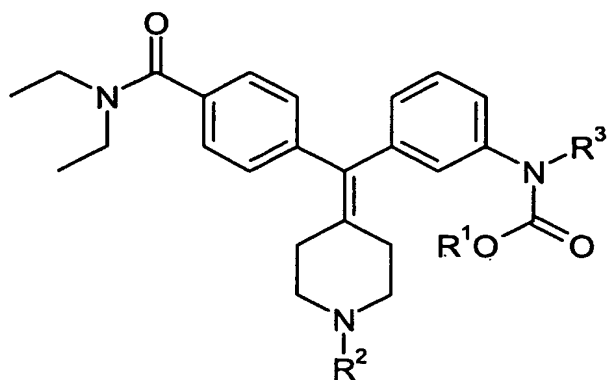
II

wherein R^1 and R^3 are, independently, selected from hydrogen, C_{1-6} alkyl, and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl; and

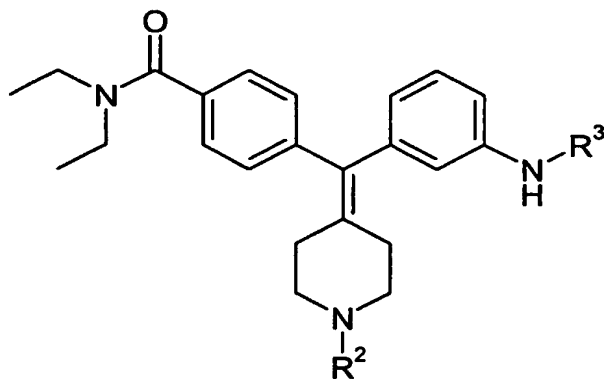
R^4 is selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl, wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR,

-SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl.

13. A process for preparing a compound of formula I, comprising:

**I**

reacting a compound of formula IV with R¹O-C(=O)-X:

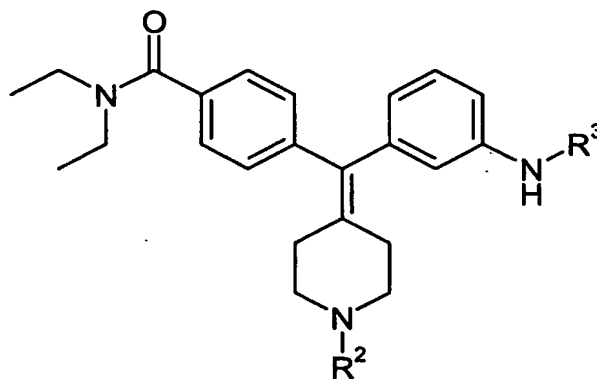
**IV**

wherein X is halogen;

R¹ and R³ are, independently, selected from hydrogen, C₁₋₆alkyl, and C₃₋₆cycloalkyl, wherein said C₁₋₆alkyl and C₃₋₆cycloalkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl; and

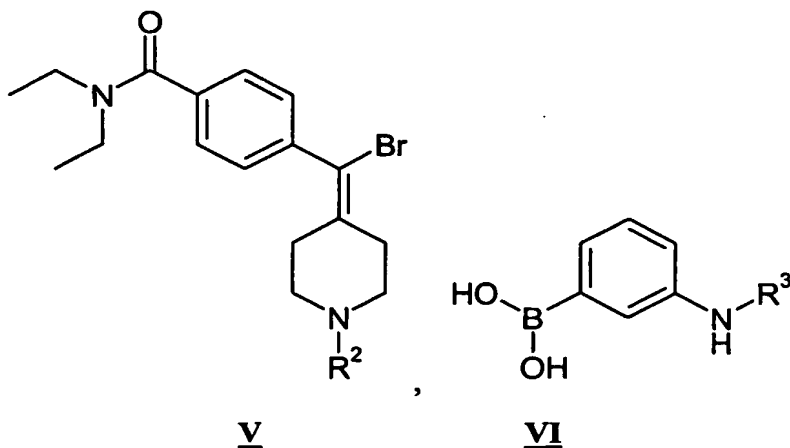
R^2 is selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl, wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, and C_{3-6} cycloalkyl- C_{1-4} alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl.

14. A process for preparing a compound of formula IV, comprising:



IV

reacting a compound of formula V with a compound of formula VI or esters thereof:



V

VI

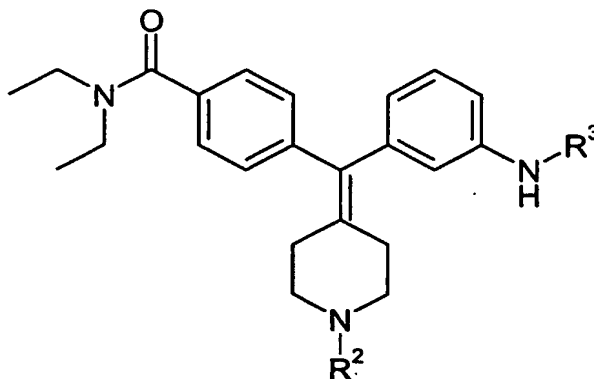
wherein R^3 is selected from hydrogen, C_{1-6} alkyl, and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH,

-NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl; and

R² is selected from C₁₋₆alkyl, C₂₋₆alkenyl, C₃₋₆cycloalkyl, and C₃₋₆cycloalkyl-C₁₋₄alkyl, wherein said C₁₋₆alkyl, C₂₋₆alkenyl, C₃₋₆cycloalkyl, and C₃₋₆cycloalkyl-C₁₋₄alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl.

10

15. A compound of formula IV, a pharmaceutically acceptable salt thereof, diastereomers, enantiomers, or mixtures thereof:

**IV**

15 wherein R³ is selected from hydrogen, C₁₋₆alkyl, and C₃₋₆cycloalkyl, wherein said C₁₋₆alkyl and C₃₋₆cycloalkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl; and

20

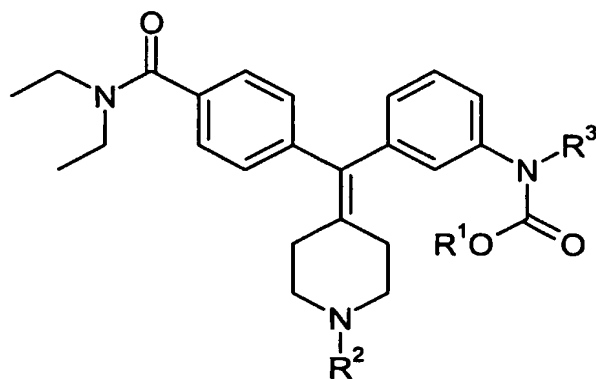
R² is selected from C₁₋₆alkyl, C₂₋₆alkenyl, C₃₋₆cycloalkyl, and C₃₋₆cycloalkyl-C₁₋₄alkyl, wherein said C₁₋₆alkyl, C₂₋₆alkenyl, C₃₋₆cycloalkyl, and C₃₋₆cycloalkyl-C₁₋₄alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR,

-SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl.

16. A compound as claimed in claim 15, wherein the compound is selected from
 5 4-[(3-aminophenyl)[1-(2-methoxyethyl)-4-piperidinylidene]methyl]-*N,N*-diethylbenzamide and pharmaceutically acceptable salts thereof.

17. A compound selected from:
 [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-ethoxyethyl)-4-
 10 piperidinylidene]methyl]phenyl]- carbamic acid, methyl ester;
 methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[1-(3-methoxypropyl)piperidin-4-ylidene]methyl} phenylcarbamate;
 [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-methoxyethyl)-4-
 piperidinylidene]methyl]phenyl]- carbamic acid, methyl ester; and pharmaceutically
 15 acceptable salts thereof.

18. A compound of formula I or pharmaceutically acceptable salts thereof,



20

I

wherein R³ is hydrogen, R¹ is selected from methyl and ethyl; and R² is C₁₋₃alkoxy-C₁₋₄alkyl.